Floodplain Recommendations for New Growth Areas

For the purposes of these recommendations, 'New Growth Areas' are defined as those areas outside the City limits and zoned AG - Agricultural or AGR - Agricultural Residential at the time a new standard is adopted. (See Floodplain Policy Application Areas map in Appendix L).

1. No Adverse Impact

Adopt No Adverse Impact Policy

In New Growth Areas, the City of Lincoln and Lancaster County should have a policy of No Adverse Impact, with a goal of ensuring that the action of one property owner does not adversely impact the flooding risk for other properties, as measured by increased flood stages, flood velocity, flows or the increased potential for erosion and sedimentation.

No Adverse Impact is a managing principal and policy goal **developed by the Association of State Floodplain Managers** (ASFPM) in support of long-term, sustainable approaches to reducing the nation's flood losses. A "No Adverse Impact Floodplain" is defined as one where the action of one property owner does not adversely impact the flooding risk for other properties, as measured by increased flood stages, flood velocity, flows or the increased potential for erosion and sedimentation. The ASFPM recommends that the No Adverse Impact policy be **implemented nationwide at a local level** through a range of approaches based upon what is most effective for a particular community.

2. Floodplain Mapping

Improve Accuracy of Floodplain Maps

The City and County should continue to develop and improve a comprehensive, watershed approach to floodplain mapping which recognizes the community interest and responsibility for the prevention of future flood damages. Accurate floodplain mapping should be a priority to which specific resources are dedicated, utilizing the latest technology and data available, and should be furthered through partnerships with other agencies.

The Task Force discussed the disadvantages of the **variable level of accuracy in mapping** and flood elevation information within the FEMA floodplain maps and flood insurance studies for the City and County. There was considerable discussion among Floodplain Task Force members regarding the **need to continue updating** the floodplain maps in order to have dependable information on which to base decisions and policies. While it was acknowledged that the 100-year floodplain boundary and flood elevation information is being developed for Lincoln and its future growth areas as watershed master plans are completed basin by basin (see Policy Item 14, 'Best Available Study Information'), there was concern about the period of time that it would take to develop this information using an incremental approach. The Task Force acknowledged that the floodplain map update process will be facilitated by the City having entered into the **Cooperating Technical Partners program** for floodplain mapping with

FEMA. However, the group expressed that mapping should be a priority to which specific resources are dedicated. Individual members felt that the role and responsibility of the Lower Platte South Natural Resources District and the Corps of Engineers should also be identified in the recommendation.

3. No Net Rise/Compensatory Storage Standard

Adopt New Floodplain Standard

A No Net Rise and Compensatory Storage standard should be adopted. This means that development within the 100-year floodplain in New Growth Areas should be required to demonstrate through an engineering study that it will cause no increase in the water surface elevation of the 100-year flood greater than five hundredths of a foot (0.05'). In addition, compensatory storage should be required at a ratio of 1 to 1 for volume of flood storage lost to fill or structures in the 100-year floodplain. Compensatory storage should be provided with the objective of being hydrologically similar to lost flood storage volume, but a hydrologic study should not be required to demonstrate that the storage is hydrologically equivalent.

The No Net Rise/Compensatory Storage standard recommended by the Task Force evolved out of discussion surrounding **two fundamental functions of the floodplain:**

1) **'No Net Rise,'** which relates to the conveyance properties of the floodplain, or "how the water flows"; and

2) **'Compensatory Storage,'** which relates to the volume, or "how much total water there is".

A **No Net Rise standard** by itself would preserve conveyance, but would not regulate 'non-conveyance' areas, backwater areas or the attenuating (flood reducing) characteristics of the floodplain. Also, technical information brought to the Task Force indicated that a community could preserve significant functions of the floodplain by adopting a 'No Net Rise' standard, but the No Net Rise standard by itself would not address increases in velocity or erosion. Alternatively, if only a **Compensatory Storage standard** were adopted, hydraulic conveyance would not be preserved, and there could be a rise in flood heights. The purpose for coupling 'Compensatory Storage' with 'No Net Rise' was to identify a standard, which would address conveyance of floodwater and would also insure that the amount of water reaching the water course would remain the same. The two approaches were considered to complement one another and to meet the goal of No Adverse Impact outlined in the first policy recommendation.

Land Use Designation

An important consideration for **New Growth Areas** was the Lincoln/Lancaster County Land Use Plan (see Lincoln/Lancaster County Land Use Plan map in Appendix L) adopted as part of the **2025 Comprehensive Plan**, which **designates areas for future urban development outside of the floodplain** to avoid introducing new development to flood risks and to preserve the functions of the floodplain. The majority of floodplain within the New Growth Areas is designated as Green Space, Environmental Resources, or Agricultural Stream Corridors.

Hydraulic and Hydrologic Modeling

There was considerable discussion regarding what modeling should be required to demonstrate that the No Net Rise/Compensatory Storage standard was being met. Consideration was given to the fact that the

analysis to meet the 'No Net Rise' criteria is straightforward and utilized regularly today in the Floodway. However, it was acknowledged that determining the **hydrologic equivalent for Compensatory Storage** through modeling would be difficult and was not anticipated to be a practical requirement. Thus, it was agreed that compensatory storage should be provided with the objective of being hydrologically equivalent, without requiring a hydrologic model to demonstrate this fact.

Allowable Rise

Information was presented to the Task Force which indicated that allowing a very small rise could make a significant difference in the **flexibility of the No Net Rise** portion of the standard and would be easier to administer. It was pointed out that there are many actions that can be taken within the floodplain which would be unable to show No Rise, but would have an 'infinitesimal' impact. Thus, the Task Force included the provision to **allow for five hundredths of a foot (0.05') rise** to account for these circumstances.

'Mitigation' Ratio for Lost Floodplain Storage

Early draft recommendations discussed by the Task Force identified that the 'mitigation' ratio for lost floodplain storage should be greater than 1 to 1. The discussion reflected a desire to base the standard for Lincoln and Lancaster County upon what was being done nationwide in this regard, however, the research showed that there is a **range of mitigation ratios utilized nationwide for flood storage**, with no overall consistency in the ratios. While there are examples of other communities where mitigation is required at greater than 1 to 1, these examples often were in communities where a Compensatory Storage standard was not coupled with a No Net Rise standard. Thus, it was determined that a **1 to 1 mitigation ratio would be sufficient** for Compensatory Storage as long as this was **coupled with a No Net Rise** standard.

Example Floodplain Developments

The Task Force was interested in examples of developments within the floodplain that met a similar standard. It was discussed that **Horizon Business Center/Southwest High School** site did meet a Compensatory Storage standard, and was likely close to meeting a No Net Rise standard as well, although this was not measured. It was also discussed that while **Haymarket Park** did not meet a No Net Rise/Compensatory Storage standard, it met the standards identified in the FEMA Flood Insurance Study to preserve Salt Creek flood storage outside of the levee system.

Additional Engineering Costs

Task Force members raised concerns about the additional engineering costs of meeting a No Net Rise/Compensatory Storage standard. To address this issue, engineering costs were researched and are provided (based upon discussions with various engineering firms) within this report in Appendix K. In general, there was found to be an **'economy of scale**', meaning that there was typically a base cost which did not vary with the size of the site, in addition to a cost per acre. Thus, the larger the site, the less of an increase would be expected in engineering costs to meet a No Net Rise/Compensatory Storage standard. In evaluating engineering as a percentage of total development costs, the **average estimated range in additional engineering costs to meet this standard would be 1.4 % to 0.3% of the development costs for sites in the range of 10 to 100 acres, respectively.**

Other Economic Impacts

The **projected costs of both adopting a higher standard and continuing with the present-day standard** are articulated by the Corps of Engineers (COE) and CDM studies (see Executive Summaries in Appendix H). Both studies utilized example floodplain reaches that are projected to be indicative of the

majority of floodplains in Lincoln and Lancaster County with regard to fill in the flood fringe.

The COE study summarized in Appendix H evaluated three scenarios on the Dead Man's Run and Beal Slough floodplains, from moderate to more extreme losses of flood storage. The study concluded that, within the study reaches, **increased flood damages** resulting from loss of flood storage had the potential to range from **$2.6 to $10.9 million on Dead Man's Run**, and from **$0.1 to $1.9 million on Beal Slough**. Economic analysis was not performed for **100% loss of flood storage**, which showed a substantially greater rise in flood heights (2.8 foot rise and 4.3 foot rise on Deadman's Run and Beal Slough, respectively) than the alternative scenarios where the economic analysis was performed.

The CDM study summarized in Appendix H projected the reduction in flood damage possible to public infrastructure if higher standards were adopted and the economic costs to private development of meeting a higher standard. Half-foot Rise and No Net Rise/Compensatory Storage standards were evaluated. Under the No Net Rise/Compensatory Storage standard, as compared to the current One-foot Rise standard, flood damage costs to public buildings, streets and stream crossings were projected to be reduced 27% and 44%, respectively. **Reduction in flood damage costs** based on a No-Rise/Compensatory Storage scenario were projected at **100%, 27% and 44%** for public buildings, streets, and stream crossing structures, respectively. **Increased costs to private development** to meet a No Rise/Compensatory Storage standard were projected at **14%, 21% and 10% for traditional** residential, commercial and industrial development configurations, respectively. **For cluster developments** allowed by the ordinance today through Community Unit Plans and Planned Unit Developments, the No Net Rise/Compensatory Storage standard was projected to increase costs to private development by 6% or less.

(See Policy Item 12 for discussion of this standard as it relates to substantial improvements and refer to Appendix K for additional information. Also see the No Net Rise and Compensatory Storage Fact Sheet included in Appendix I).

4. Stream Crossing Structures

Provide Flexibility for Stream Crossings

The City and County should adopt a practical standard for stream crossing structures, which takes into account that there are circumstances in which it is structurally or financially infeasible to construct stream crossings without causing any rise in flood heights in the flood fringe. Construction of stream crossing structures should be required to demonstrate a sequencing approach that seeks first to avoid, then to minimize, then mitigate for any impacts to flood storage or flood heights. The standards should be flexible and consider alternatives such as an allowable rise between 0'-1' in the flood fringe, allowable loss of flood storage, and/or purchase of property or easements where flood heights will increase and an amendment is made to the FEMA flood insurance rate map.

The Floodplain Task Force was presented with information indicating that there are circumstances in which it is **structurally or financially infeasible to construct stream crossings without causing any rise** in flood heights in the flood fringe.

Replacing Existing Structures

Where existing stream crossing structures exist and the grade of the road is not being raised, a No Net Rise/Compensatory Storage standard **would not be anticipated to have a significant impact on bridge and culvert replacements**, since most replacements meet a higher standard than the older structures being replaced.

New Stream Crossing Structures

Based upon anecdotal evidence from conversations with floodplain managers from other communities and other research supplied to the Task Force, it appears that adopting a No Net Rise/Compensatory Storage floodplain standard with no flexibility would be likely to **increase the cost of constructing new stream crossing structures by approximately 25%**. However, it was discussed that the ability to use compensatory storage, property rights acquisition, and increases in downstream conveyance capacity would make it more flexible and could offset many of these anticipated increases in cost.

While the Task Force agreed that flexibility with regard to stream crossing structures was important, it was emphasized that the flexibility outlined in this policy **should be provided for private as well as public stream crossing structures**. Individual Task Force members suggested the City and County ought to meet a higher standard than the private sector. Task Force members also expressed that any **impacts to flood storage or conveyance should have careful consideration**. The 'sequencing' approach identified in the recommendation is modeled upon the approach required by Section 404 of the Clean Water Act for impacts to wetlands, and was included in order to discourage an approach that would have adverse impacts. *(See Appendix K for additional information).*

5. Stream Buffers

Apply Stream Buffers to Mapped Floodplains and Smaller Streams

The Minimum Flood Corridor stream buffer or similar standard should be applied in the City and County within the FEMA-mapped floodplains and along smaller, unmapped streams that have a defined bed and bank. Encroachments should be permitted per the existing standards for Minimum Flood Corridors for operation, maintenance and repair, channel stabilization, stormwater storage facilities, utility crossings, public parks, pedestrian/bike trails and other recreational uses and public purposes. However, proposed encroachments should be required to demonstrate a sequencing approach that seeks first to avoid, then to minimize, then mitigate for any encroachments. Mitigation for loss of vegetation and flood storage should occur at a 1.5 to 1 ratio. Where land uses prior to development have an impact on the buffer width, the area should be replanted with vegetation compatible with the corridor and water quality benefits.

The Task Force discussed **City of Lincoln standards, which currently require a "minimum flood corridor"** buffer to be preserved along only those drainageways **outside the mapped floodplain** that drain greater than 150 acres. Thus, smaller tributaries draining less than 150 acres or larger streams that have a mapped floodplain require no buffer protection. The width of the minimum flood corridor is equal to the stream channel bottom width, plus 60 feet, plus 6 times the channel depth. It was determined that the Minimum Flood Corridor stream buffer or similar standard should be applied within the FEMA-mapped floodplains and along smaller, unmapped streams that have a defined bed and bank.

Mitigation

There was considerable discussion regarding **mitigation** that should be required **for impacts to buffers** along stream corridors. The majority of Task Force members felt that replacement of lost plant materials should occur at a ratio greater than 1 to 1 (1:1), due to the **plant mass lost when mature vegetation is replaced with new plantings**. Thus, a mitigation ratio of 1.5:1 was recommended. Information was provided to the Task Force showing a range of mitigation ratios nationwide for impacts to wetlands and stream buffers. The ratios generally ranged from 1:1 to 3:1, with greater ratios required for impacts to unique environmental areas. There was concern about the lack of a scientific basis for choosing any particular mitigation ratio, but the majority of Task Force members felt that 1.5:1 was an acceptable mitigation ratio given the available information. Individual members expressed some discomfort with the numbers but agreed in concept.

Buffer Width

Individual Task Force members also expressed concern about the **width of buffers that would be required along degraded, mainstem stream channels** like Salt Creek and Stevens Creek if the "minimum flood corridor" standard is applied. Examples were provided to the Task Force for a Stevens Creek tributary and the mainstem channel downstream in the basin. The buffer widths at each location were calculated and shown on a map for comparison with the existing FEMA-mapped 100 year floodplain and floodway. Both examples on the mainstem of Stevens Creek resulted in buffer widths much smaller than the existing 100 year floodway, and the floodway and buffer for the smaller Stevens Creek Tributary were nearly equal in width. The maps adequately addressed the concern of the Task Force and members agreed that the "minimum flood corridor" standard should be applied to areas within

the FEMA-mapped floodplain. Discussion also included **applying the standards in a reasonable way** that would, for example, not require a buffer area on a plateau outside of the floodplain. *(See Greenfield Approach Fact Sheet in Appendix I for additional information).*

6. Surplus/Vacated Floodplain Property Policy

Preserve Flood Storage on Surplus Property

The City and County should adopt a policy where, under normal circumstances, City or County property in the floodplain is viewed as serving a public purpose and not be proposed for surplus. If there are unusual circumstances that cause the consideration of declaring surplus property in the floodplain, the City or County should retain a permanent conservation easement that protects the flood storage capacity, or any flood storage impacts should be mitigated at a 1 to 1 ratio. Declaring surplus property should not be considered *under any circumstances* where floodplains contain environmental resources such as riparian areas or stream corridors that provide habitat and water infiltration benefits or serve as connectors to natural areas.

When other publicly-owned property in the floodplain is proposed for surplus, the City should consider purchasing the property fee simple, or alternatively, purchasing a permanent conservation easement where appropriate to preserve flood storage and other environmental resources.

When street or alley ROW in the floodplain is proposed for vacation, the City or County should retain a permanent conservation easement that protects the flood storage capacity. Consideration should be given to allowing for a conservation easement to be deeded over an alternate floodplain area having equal or greater flood storage volume.

Discussion on this policy item included consideration of the **amount of publicly owned property within the floodplain**. This information was provided in the form of a map to the Task Force. (See City of Lincoln/Lancaster County Publicly Owned Land in the Floodplain map, Appendix L).

Other Task Force dialogue on this policy item included:

1) Consideration of economic issues and the long-term costs and benefits;

2) The need to take into account the potential for multiple benefits, including opportunities to meet some of the recreational goals of the City and County.

3) Whether mitigation for flood storage impacts to surplus properties should be provided at greater than a 1:1 ratio to offset the loss of publicly owned floodplain areas.

4) Opportunities to partner with other agencies.

(See Maintain Storage on Surplus Property Fact Sheet in Appendix I).

7. Floodplain Buyout Program

Develop a Floodplain Buyout Program

The City and County should develop and implement a continuing floodplain buyout program, which is sensitive to the need to minimize impacts on neighborhoods and historic districts. Special emphasis should be placed upon sites that provide multiple benefits. These include opportunities to develop contiguous open space, preserve environmental resources, and to mitigate flood damage by providing additional detention for flood water during major storm events. An evaluation should be performed to identify potential funding sources, and where possible, the City and County should form partnerships and pool resources with other public agencies. Eminent domain should be used to acquire property only as a last resort.

While there was clear support on the Task Force for the creation of a floodplain buyout program, there was considerable discussion regarding **how such a program would be funded.** The Task Force recommendation was for a range of alternatives to be investigated through an evaluation of funding resources. Individual members felt that the policy recommendation should include specific reference to potential funding sources.

8. Floodplain Development Fee

Do Not Charge Floodplain Development Fee

At this time, it is not appropriate for the City or County to charge a floodplain development fee. Consideration of a floodplain development fee would require further evaluation regarding alternative fee structures and criteria for applying the fees in a logical and equitable manner. If a fee is established at some time in the future, consideration should be given to dedicating the revenue to advance the flood mapping program and to assist in the funding of floodplain buyouts.

Information regarding precedents for floodplain development fees was not available for evaluation by the Task Force. Research on this topic revealed examples of fees charged in other communities that related more to environmental impacts than to loss of flood storage or conveyance. There was concern on the part of Task Force members about **how a fee would be calculated and how the funds would be used.** Individual members also felt that a floodplain development fee would be a double burden when considering the increased engineering costs necessary for development within the floodplain to meet a No Net Rise/ Compensatory Storage standard.

9. Best Management Practices

Encourage Best Management Practices

'Best Management Practices' such as grassed swales, water quality wetlands, retention cells, etc. should be strongly *encouraged* in floodplain areas. Best Management Practices are identified in the City of Lincoln Drainage Criteria Manual and can offset impacts to the natural and beneficial functions of floodplains when they are developed.

The Task Force had considerable discussion regarding 'Best Management Practices' (BMP's) as they relate to development in the floodplain. It was acknowledged that **preservation of stream buffers** is a BMP, which is **included as a separate policy** recommendation in Policy Item Five. Stream buffers are a BMP because they provide water quality and stream stability benefits, as well as assist in reducing the velocity of flood waters, and can be designated as a particular width and composition. The Task Force discussed the **difficulty of quantifying and prioritizing other BMP's** in a way that could be used for a required standard for floodplain management. Thus, the decision was to recommend a **policy which encourages** the implementation of BMP's in floodplain areas. Individual members felt that BMP's could be more easily integrated into residential areas than into commercial or industrial developments.

There are a number of BMP's identified in the City of Lincoln Drainage Criteria Manual. The Task Force discussed the importance of continuing to update this reference as BMP's evolve and improve.

(See Best Management Development Practices Fact Sheet in Appendix I for additional information as well as Supporting Information in Appendix K).

10. Salt Creek Flood Storage Areas

Take Action Regarding Salt Creek Floodplain Through Lincoln

Not Applicable in New Growth Areas.

11. Building Construction Standards

Encourage Higher Building Construction Standards

Buildings in New Growth Areas should continue to be protected to an elevation 1 foot above the 100-year flood elevation in accordance with the minimum requirements of the State of Nebraska. Should a No Net Rise/Compensatory Storage standard *not* be adopted in New Growth Areas, buildings should be protected to an elevation 1.5 feet above the 100-year flood elevation.

'Best Construction Practices' relating to site development and construction should be strongly encouraged. These include reducing impacts to flood storage by limiting fill to building pads in lieu of filling an entire site, floodproofing non-residential structures, and attention to the alignment of buildings relative to the flow of flood water. Development should be encouraged to demonstrate a sequencing approach that seeks first to avoid, then to minimize, then mitigate impacts to the floodplain.

The Task Force discussed **whether a higher level of floodplain protection should be required for structures in the floodplain**. The initial discussion was focused on the "freeboard," or elevation above the 100-year flood elevation to which buildings should be protected to serve as a buffer and to account for variances from predicted flood heights during flood events.

It was concluded that the proposed No Net Rise/Compensatory Storage standard (together with existing standards regarding stormwater runoff), should prevent significant increases in flood heights, and thus **the 1' minimum freeboard** required by the State of Nebraska would be **sufficient if the No Net Rise/Compensatory Storage standard is adopted**. However, the Task Force indicated that if such a standard was not adopted, buildings should be protected to an elevation 1.5 feet above the 100-year flood elevation. Furthermore, Task Force members also felt it was important to **encourage 'best construction practices'** that would minimum adverse impacts to the floodplain.

12. Substantial Improvement Threshold

Protect Lateral Additions to Non-Residential Structures

Where there are existing residential, commercial, or industrial structures within the floodplain, the substantial improvement threshold should continue to be implemented the same way that it is today (which reflects the minimum federal requirements). That is, when an improvement is made to a structure that is equal to or greater than 50% of its value, the entire structure must be brought into compliance with the floodplain regulations. Each separate improvement is considered individually relative to the 50% threshold.

In lieu of a new policy to cumulatively track substantial improvements, the City and County should implement a standard requiring *all* lateral additions to non-residential structures to be floodproofed or otherwise protected to 1' above the base flood elevation. (Should a No Net Rise/Compensatory Storage standard *not* be adopted in New Growth Areas, lateral additions should be protected to an elevation 1.5 feet above the 100-year flood elevation). Residential structures should be exempt from this requirement. (All structures will still have to meet the current 50% improvement/damage threshold to remain in compliance with minimum NFIP requirements).

To be consistent, the No Net Rise/Compensatory Storage standard should also be met when a substantial improvement (≥ 50% of the value) is made to a structure, or when a lateral addition is made to a non-residential structure.

The Task Force had considerable discussion regarding the '**substantial improvement threshold**.' When an improvement is made to a structure in the floodplain that is equal to or greater than 50% of its value, *the **entire structure*** **must be brought into compliance** with the floodplain regulations. Today, each separate improvement is considered individually relative to the 50% threshold. Thus, improvements up to a value of 49% can repeatedly be made to a structure without bringing it into compliance with floodplain regulations.

The Task Force **considered whether to adopt a 'cumulative' standard** that would take into account multiple improvements made over a period of time. However, there was concern regarding the impact that a cumulative substantial improvement policy would have upon existing neighborhoods in the floodplain, and the ability of home or business owners to make investments in existing buildings in the floodplain. Individual members also expressed a concern that inaccurate data is being used to make floodplain determinations due to the need for revised floodplain studies.

In lieu of a new policy to cumulatively track substantial improvements, the Task Force recommended that the City and County implement a standard requiring ***all*** **lateral additions to non-residential structures to be floodproofed or otherwise protected** to 1' above the 100-year flood elevation. It was discussed that the option to floodproof rather than to elevate lateral additions to non-residential structures would provide flexibility and make the standard less burdensome to meet.

Individual members expressed concern about the No Net Rise/Compensatory Storage standard being applied when substantial improvements or lateral additions to buildings are made.

13. Cluster Development

Provide Incentives for Cluster Development

Additional incentives should be adopted for clustering development outside the floodplain by broadening the current language in the zoning ordinance regarding the protection of natural/environmentally sensitive areas that is currently included in the AG & AGR districts. Consideration should be given to appropriate density bonuses and more specific language regarding clustering outside of floodplain areas. Permanent conservation easements should be required as a method of protection to receive the bonus. Land areas left open by clustering development outside the floodplain should be utilized for open space, parks, trails, or natural areas as compatible with the site and the particular floodplain area.

The Task Force discussed and rejected the potential for mandatory cluster development requirements where a portion of a development was located in a floodplain area. Instead, the group expressed the importance of **providing incentives for clustering development outside the floodplain.**

The CDM Alternative Floodplain Management Strategies study (see Cluster-Open Space Development Fact Sheet, Appendix I) examined this strategy, and additional information was also provided to the Task Force relating to an evaluation of open space floodplain areas completed within the City of Lincoln. The latter evaluation looked at the effects of proximity to open space floodplain areas on property values in four different subdivisions in Lincoln. The **average sale price of lots adjacent to open floodplain areas**, accounting for differences in size, was approximately **20-35% higher** than those in the same subdivision not adjacent to open space floodplain areas. There was some discussion amongst Task Force members about whether a portion of that cost difference could be attributed to the **grades on lots abutting floodplain open space**. Individual members pointed out that the grade on lots adjacent to floodplain areas would be conducive to walk-out basements, which would bring a higher price for the lot. Some members also pointed out that cluster type development is not always feasible from the perspective of market demands.

14. Use Best Available Floodplain Study Information

Use Floodplain Information From Watershed Plans

100-year floodplain boundary and flood elevation information (existing conditions) developed for watershed master plans should be utilized as the 'best available information' for the purposes of administering the Floodplain Ordinance relative to requirements for proposed subdivisions and building permits. Until accurate information can be developed through the watershed master planning process, development and planning efforts should recognize the variable reliability of the FEMA floodplain maps and discourage building to the edge of the FEMA floodplain boundaries.

The acquisition and use of '**best available floodplain information**' was an important topic for the Floodplain Task Force. Task Force members described this information as a 'moving target' and expressed the need to **anticipate future conditions** and to limit mistakes that would have an impact upon future generations. The Task Force stopped short of recommending regulation based upon a 'future conditions' floodplain, but did recommend that consideration be given to this approach in the future following further evaluation.

Individual members expressed concerns regarding the potential for an uneven playing field and uncertainty across the market if 'best available information' is developed through **watershed plans basin by basin**. However, other members felt that a lack of accurate mapping would put the community further behind. Other comments included the use of 'best planning practices' and the communication of floodplain information to encourage development to stay back from the floodplain boundary in case it changes in the future. *(For additional information, see Watershed Master Planning Fact Sheet included in Appendix I and Supporting Information regarding the 100-year storm limits in Appendix K).*

Apply 'Stormwater' Standards When Master Plan Information Unavailable

The stormwater standards should continue to apply to floodprone areas, or "100-year storm limits" which are required to be shown with new subdivision proposals along smaller tributaries. Floodplain standards should not be applied to these areas unless they are shown on the FEMA floodplain maps or have been identified through a watershed master plan.

Consider "Future Conditions" Floodplain Mapping

Consideration should be given to regulating based upon a "future conditions" floodplain when the information is available through watershed master planning. However, this topic needs further evaluation and discussion. The benefits of this approach need to be assessed relative to the benefits already provided by: 1) the protection of flood storage and conveyance following the adoption of new standards for floodplain areas, 2) the detention/retention standards already in place to address stormwater runoff throughout the basin, 3) watershed master planning and implementation addressing the timing of stormwater flow throughout the basin. The implementation of these three elements may or may not prevent significant increases in flood boundaries in the future.

15. Real Estate Transactions

Improve Floodplain Disclosure in Real Estate Transactions

Lincoln and Lancaster County floodplain policies should reinforce accountability and disclosure laws regarding real estate transactions with regard to notifying prospective buyers of properties in the 100-year floodplain of the flood hazard and the requirement for flood insurance, and should encourage the provision of information regarding the 100-year flood elevation. The City and County should enhance public education efforts regarding the floodplain and should consider revisions to the Land Subdivision Ordinance and Lincoln Housing Code to require the disclosure of floodplain information to the buyer prior to the sale of properties in the floodplain.

Individual Task Force members expressed an interest in this policy going a step further to recommend that real estate agents be required to disclose specific information about properties in the floodplain early in the sale process, including the location within the floodplain, the 100-year flood elevation, and an overview of the responsibilities for properties in the floodplain. Examples were provided of circumstances when floodplain **property buyers were not aware that the property was in the floodplain**, or were not aware of the implications of this fact. However, the Task Force was informed that **real estate agents are regulated by state law**, and local government cannot require a standard for real estate agents that exceeds state statutes. The Task Force discussed the **responsibility of the buyer to be informed versus the responsibility of the seller to inform** him or her, as well as the responsibility of local government to help educate potential buyers. The majority was satisfied with the language included in this policy recommendation.

16. Assessments for Floodplain Property

Improve Methods for Assessing Floodplain Properties

The County Assessor should re-examine the methodology for assessing and taxing land held in conservation easements to reflect through assessments the change in value of property held in such easements. In addition, if a No Net Rise/Compensatory Storage standard is adopted, valuations for floodplain properties as determined by the County Assessor should reflect the change in value.

Individual Task Force members expressed concern that **flood prone properties are not fairly assessed**. Discussion included recognition that only about 10% of properties in the floodplain have flood insurance, and that relief provided by a more fair assessment might be dedicated to additional flood insurance coverage. Other information provided to the Task Force suggested that a previous study on Dead Man's Run had shown that **homes within the floodplain were appraised at a value 10% less** than those in the same neighborhood outside of the floodplain. In addition, there is a provision regarding property tax under the Nebraska state **Conservation Easement Act**. Individual members also thought that, if assessed appropriately, the value of floodplain properties could decrease if a No Net Rise/Compensatory Storage standard were adopted, and there were questions regarding how this could **impact the City or County** relative to property taxes.